

2018 SnapPlus Helpful Hints

Need SnapPlus Help?

If you have questions or problems using SnapPlus please check the website at snapplus.wisc.edu for answers about database management, soil test importing, SnapMaps, exchanging data with other people, and how to use certain features within the software. Check out the *How To* videos located under the *Support* menu items for tutorials on SnapPlus.

Videos <https://snapplus.wisc.edu/news-help/how-to-videos/>

- Using Nutrient Systems
- Dismissing and Restoring a SWQMA in SnapMaps
- Changing Field Labels in SnapMaps
- How to Create an MS Excel Document Daily Log and Import it
- Updating new boundaries in a field using a new shapefile
- Making your Own Customized Map Using the Snipping Tool and MS Word

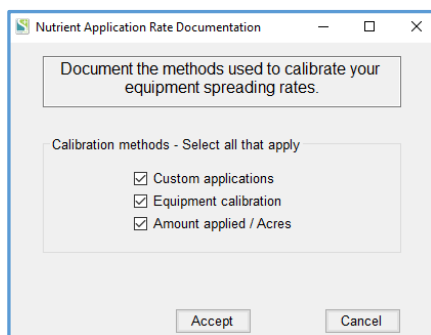
Contact these DATCP folks for your first level of software support and for NM questions. If necessary, they will forward the following information to the UW Soils team.

Sue Porter (608) 224-4605, Sue.Porter@wi.gov
Stephanie Schneider (715) 832-6547 ext. 6019, Stephanie.Schneider@wi.gov
Mark Jenks (608) 224-4507, Mark.Jenks@wi.gov
Ryan Erisman (608) 224-4604 Ryan.Erisman@wi.gov
Rachel Rushmann (608) 224-4622 Rachel.Rushmann@wi.gov Producer Led

1. Screenshot of message received. Use the Microsoft Snipping Tool to take a screenshot of the pop up message or error present on the program. Save and attach to email.
2. Farm Database. As soon as you notice a problem in the program, send the farm database (snap.Db) through email.
3. Syslog Document. The Syslog will show errors and any warning you are receiving when experiencing problems with the program. To access go to Help on the menu bar and scroll down to View Syslog. Click all errors and select errors in the drop down labeled error level. The errors that are present will be narrowed down. Click Save and then attach the document to an email to our address.

Technical UW Soils team support email: support@snapplus.wisc.edu ; PI (Phosphorus index) support: Laura Good, 608-262-9894, lwgood@wisc.edu

Farm Screen



The Calibration Method

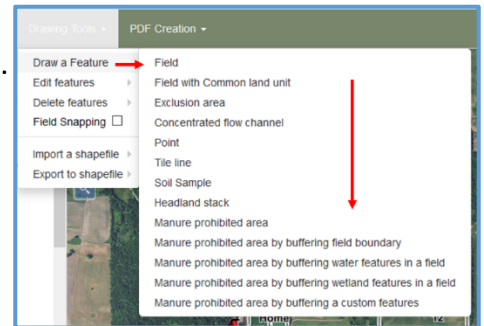
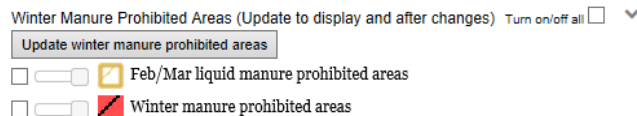
The 2015-590 NM Standard requires documentation for how nutrient rates are determined. Planners will be prompted to select their calibration methods. This follows the 2015-590 Standard Checklist item 1. g.

Corrections to SnapPlus's RUSLE2 management templates for small grains – RUSLE2 soil loss calculations did not include straw removal for barley, oats, rye, triticale, wheat – (grain+straw). The consequence is that soil loss may be higher if grain and straw is harvested. If the field exceeds T, then change past crop to grain only. This will adjust the soil loss. In future years using the grain+straw will have the corrected erosion rates.

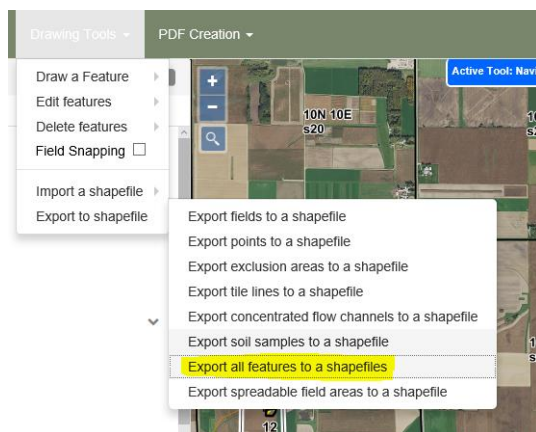
Soil Tests Screen - Naming Fields be sure to use letters, numbers, underscore, and spaces. **Do Not Use** special characters. This can causes the program to crash.

New in SnapMaps

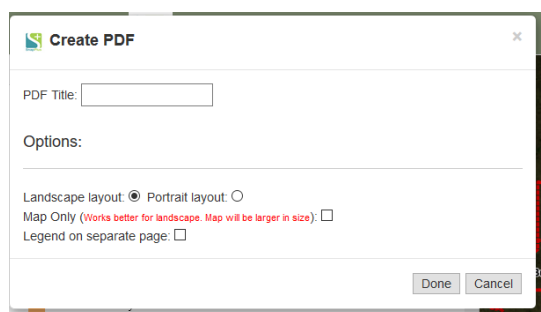
1. Draw or import manure-prohibited areas and soil sample points.
2. Winter spreading maps for all farm types.



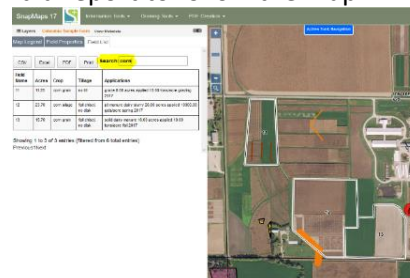
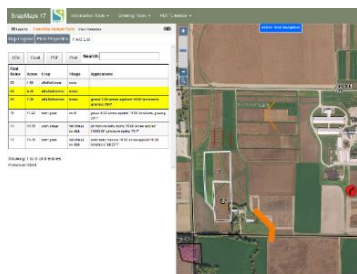
3. Upload from SnapPlus without creating overlapping features (features that significantly overlap ones already in SnapMaps will be ignored).
4. Export and back up all feature types into a single shapefile.

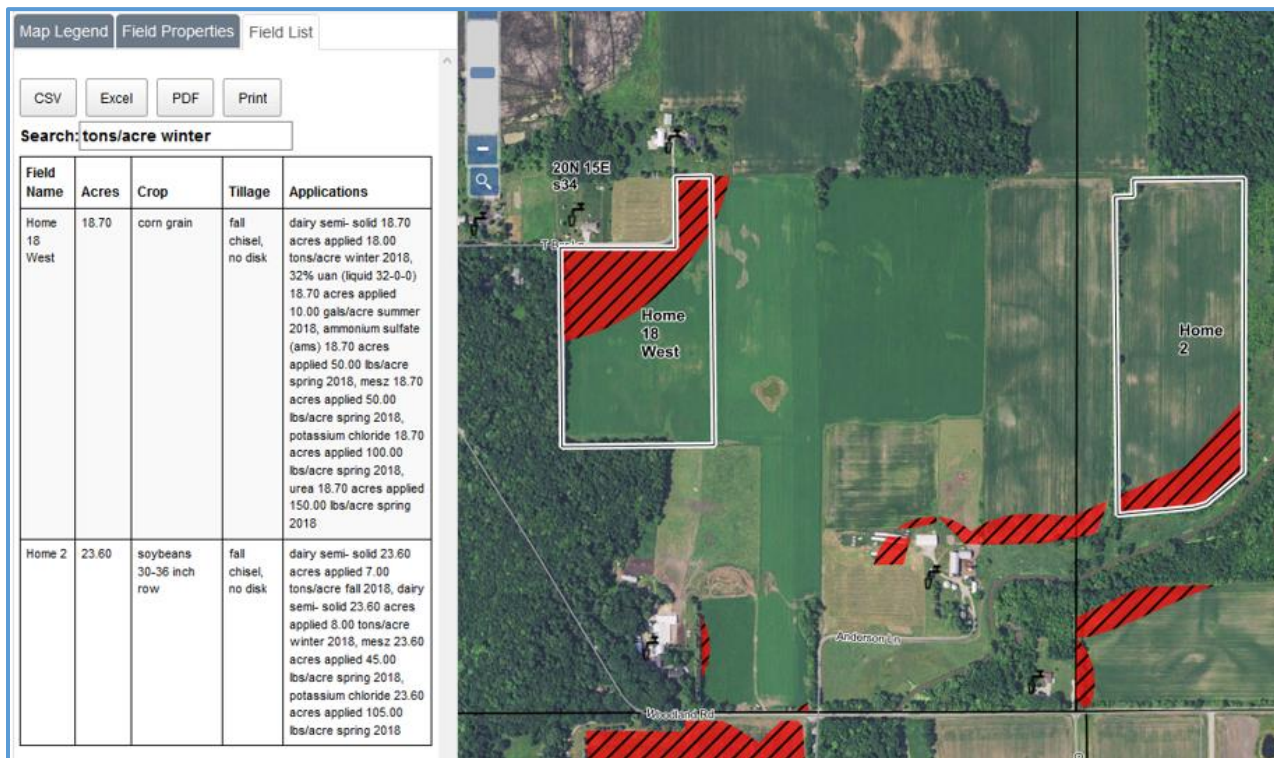


5. Create PDF maps in less than 5 seconds, with visual enhancements and your choice of landscape or portrait orientation.



6. Field list/filter: Filter fields by clicking on fields in the table. Also search fields by key word. Make a Field List for certain crops or applications and a report to follow the map.





7. Draw custom manure prohibited areas:

- Draw manure prohibited area by buffering field boundary. You can do the inside or outside of the field boundary.



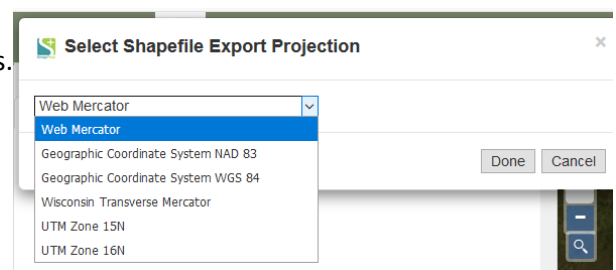
- Draw manure prohibited area buffers around wetland and water features in a field.



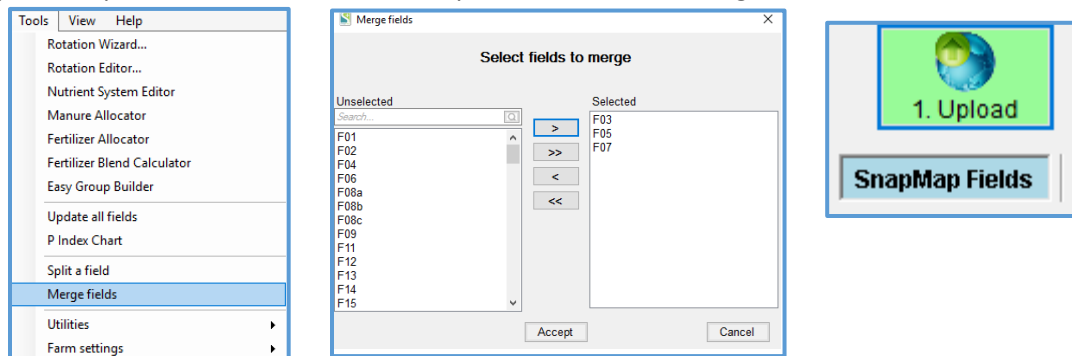
- Draw a manure prohibited area by buffering custom feature.



- Split your manure-prohibited areas to create custom patterns.
- Delete features by drawing box.
- Export shapefiles in a variety of projections.
- 2018 Preliminary layers for Silurian dolomite areas.



12. To merge every other contour strip into a single field - Merge the fields in the database using **Tools > Merge fields** and select fields to merge. The merge will now merge the geometry too. Once you merge on the desktop, then upload the new field to the map, the fields will be merged.



13. To only export shape files for certain fields - Make a group of fields you want to export the shape files for, then upload those fields to the map and export the shape files.

Field Screen – Restriction 2015-590 Nutrient Management Standard

Setup Field Restriction Features

Spreading Restriction Features
for Field Home 2

Note: If any part of the field has an N restricted soil or is in a SWQMA, then it should be marked as such below.

Field soils **Dominant critical: ZtA** **Predominant: ZtA**

Fall N Restrictions

N restricted soil other than selected soils: **Mn** Code: **W** [N Restriction definitions](#)

☐ Less than 5 ft to bedrock

Field Restrictions

☒ Field in 590 SWQMA

☐ Drinking water well or conduit to groundwater 50 ft ☐ Public well within 100 ft

☐ Local prohibitions for winter applications ☐ Municipal well within 1000 ft

☐ Slope restriction for winter applications ☐ Irrigation well within 8 ft

☐ Concentrated flow channel ☐ Tile lines present in field

☐ February/March prohibition on liquid manure

Winter - Conduits to groundwater within 300 ft of field

☐ Sinkholes ☐ Any well within 300 ft

☐ Fractured bedrock at surface

☐ Non-metallic mine (a gravel or sand mine for example)

☐ Other direct conduit to groundwater

Field Screen – Groups SnapPlus can make a group of fields, like all my corn fields, if the Cropping screen has field data. 1. Select the subtab Groups under the Field screen and click on the **Easy Group Builder**. 2. Select Crop

Farm Soil Tests SnapMaps Fields Nutrients Cropping Daily Log Reports

Fields Subfarms Groups

Select Group

Choose your criteria:

- ☐ Field Information
- ☐ Field Spreadable Acres
- ☐ Field Restrictions
- ☐ Groups
- ☐ Fertilizer Applications
- ☐ Manure Applications
- ☒ Crop Management
 - ☒ Crop Name
 - ☒ Crop Year
 - ☐ Yield Goal
 - ☐ Tillage
 - ☐ Irrigated

Easy Group Builder

Management, Crop Name, and Crop Year. Then select list of all fields, crops, and years. Filter the Crop Name corn and the Crop Year to 2017 for this example. Select group, click OK and close. If you are entering the Cropping time, then make a group by manually selecting the fields. the Field screen. Click on the green plus sign and name the Corn". Select the 2017 corn fields and send them over to the selected side to make a group. Use this group and the Rotation Wizard to select the correct year of the crop rotation for that group of fields.

search. SnapPlus will show you a column to narrow your list to "Create Group". Name your screen field data for the first Select the subtab Groups under group something like "2017

Entering nutrient rates for biosolids, wastewater, and organic by-products

If you have an analysis for an organic amendment that does not report the nutrient contents as “% of solids” units, you will need to convert the results to these units using the reported solids content. Sometimes a wastewater-type analysis does not include any measurement of the solids content and, in those cases, you cannot use the SnapPlus analysis entry boxes. You can still calculate the lbs./1000 gallons of N, P₂O₅, and K₂O, as long as concentrations are given for these nutrients. Instructions for converting various types of lab reports can be found on the SnapPlus website under Planning Information.

Biosolid analysis entry

This calculator converts organic by-products lab analysis reports to the proper units for use in SnapPlus. The results shown in the grid below will be inserted as the available nutrient values for this nutrient source.

Source name: Organic by-Products liquid, year 2018
Source type: Organic by-products, liquid

% Solids: 0.84
Total Kjeldahl Nitrogen (TKN): 2.94 % dry matter
Ammonia Nitrogen (NH₃): 1.18 % dry matter
Organic Nitrogen: 1.8 % dry matter
Potassium (K), Total recoverable: 0.6 % dry matter
Total Phosphorus (P): 0.9 % dry matter
Density: 8.8 lbs/gallon

%Total Solids	pH	EC (dS/cm)	Tap pH	Tap EC (dS/cm)	WEP (mg/L)	Ext K (mg/L)	Ext N _{org} (mg/L)	Ext N _{NO3} (mg/L)	Carbon (%)	Nitrogen (%)
Mean	0.842	6.63	2880	7.45	1082	32.14	26.23	99.40	0.00	37.97
St. Dev.	0.938	0.43	2382	0.46	404	45.45	28.75	60.31	0.00	10.85
Max	4.960	7.47	11770	8.05	2140	239.00	136.74	310.00	0.00	54.73
Min	0.030	5.29	855	6.10	522	5.18	1.03	25.40	0.00	11.90

Al (mg/kg)	As (mg/kg)	B (mg/kg)	Ba (mg/kg)	Ca (mg/kg)	Cd (mg/kg)	Cr (mg/kg)	Cu (mg/kg)	Fe (mg/kg)	Hg (mg/kg)
Mean	1758.0	9.3	44.1	58.7	30976.6	1.3	42.1	340.4	4255.4
St. Dev.	1078.7	4.7	77.4	83.2	14828.0	1.1	49.0	450.3	7935.9
Max	4619.5	28.7	448.7	465.7	57954.7	5.4	279.3	2614.9	49090.7
Min	186.4	0.0	8.5	11.2	9875.7	0.4	3.0	51.0	566.5

K (mg/kg)	Mg (mg/kg)	Mn (mg/kg)	Mo (mg/kg)	Na (mg/kg)	Ni (mg/kg)	P (mg/kg)	Pb (mg/kg)	Zn (mg/kg)
Mean	6201.2	5894.7	116.0	4.9	29216.1	32.7	8668.6	9.9
St. Dev.	7609.9	4712.2	106.5	8.3	27089.8	45.3	6829.8	11.0
Max	46239.2	21627.8	515.0	42.0	101628.1	235.0	40834.9	48.5
Min	1416.3	1309.6	25.3	0.0	1081.6	6.7	2276.3	0.0

Available nutrients (lbs/1000 gallons)

	N Surface	N Incorporated	P ₂ O ₅	K ₂ O
Application year	0.7	1.1	1.1	0.4
Second year	0.1	0.1	0	0
Third year	0.1	0.1	0	0

Nutrients Screen - Winter Produced Manure

For 2019 please account for the manure produced in the winter. Is it hauled, stored, grazed out by animals? At what amounts? The NM6 Winter spreading plan report will help you if the Manure Estimator page is filled out. It also provides fields that can have the emergency 14 days of production applied to them if necessary.

Farm Soil Tests SnapMaps Fields Nutrients Cropping Records Reports

Crop Year: 2018

Nutrient sources: Manure production estimator Animal units calculator Grazing herd setup Manure Analysis

NOTE: Animal categories are from 590 Technical Note WI-1

Livestock Manure Production Estimator

Copy Manure Production

Animal Type and Size	Subfarm	Barn name	Present in Winter	No. of head	Solid (lb/day)	Liquid (gal/day X dilution factor)	Total No. of days	% collected and spread as solid	% collected and spread as liquid	Collected Tons/yr	Collected Gallons/yr
Beef Cow 1000 lbs			<input checked="" type="checkbox"/>	12	63	7.50x3.2=24	365	50	0	69	0
Beef High Energy 1100 lbs			<input checked="" type="checkbox"/>	11	80	9.50x3.2=30.5	365	100	0	161	0
Beef High Energy 750 lbs			<input checked="" type="checkbox"/>	33	54	6.50x3.2=20.8	365	100	0	325	0
Beef High Forage 750 lbs			<input checked="" type="checkbox"/>	10	62	7.50x3.2=24	365	100	0	113	0
Dairy Calf 150 lbs			<input checked="" type="checkbox"/>	10	13	1.53x1.8=2.8	365	50	0	12	0
Dairy Calf 250 lbs			<input checked="" type="checkbox"/>	20	21	2.47x1.8=4.5	365	50	0	38	0
Dairy Heifer 1000 lbs			<input checked="" type="checkbox"/>	8	82	10.00x1.8=18	365	50	0	60	0
Dairy Lactating Cows 1400 lbs			<input checked="" type="checkbox"/>	7	148	17.70x1.8=32	365	75	0	142	0
Dairy Dry Cows 1400 lbs			<input checked="" type="checkbox"/>	5	115	13.60x1.8=25	365	75	0	79	0

Delete All

Farm Totals: 1,746 Tons 0 Gallons

If grazing, add this to the Nutrient tab as a source, then create a grazing herd to determine rates. If animals are on a feed lot with no vegetation be sure it does not have significant discharge.

Nutrient sources | Manure production estimator | Animal units calculator | Grazing herd setup | Manure Analysis

Manure/Bio Source Data

N, P2O5, K2O & S values are for first year available nutrients in lbs/unit solid or lbs/1000 gallons

Source Name	Nutrient Type	N surface	N incorp	N inject	P2O5	K2O	S	Dry matter %	Analysis Date	Known Annual Volume	Volume Units	Unit Value (Incorp)	Total Value (Incorp)
Beef Grazing	Beef, grazing	4	0	0	3	7	0	12		0	Tons	\$0.00	\$0
Dairy Semi- Solid	Dairy, semi-solid	2	2	3	3	5	0.4	15		1,711	Tons	\$0.00	\$0

SnapMaps | Fields | Nutrients | Cropping | Records | Reports

Manure production estimator | Animal units calculator | Grazing herd setup | Manure Analysis

Grazing Est

Animal Type | Number of Animals | Daily Manure Production (lbs/animal) | Total Daily Manure Production (lbs/day) | AU

Animal Type	Number of Animals	Daily Manure Production (lbs/animal)	Total Daily Manure Production (lbs/day)	AU
1,000 lbs Beef Cow	17	63	1,071	17
750 lbs Beef High Forage	10	62	620	10
750 lbs Beef High Energy	33	54	1,782	33
1,100 lbs Beef High Energy	20	80	1,600	20
450 lbs Beef Calf	15	26	390	15

Total daily production (all animals) **2.73** tons/day **95** Total AU

Grazing Estimator

Grazing application rate estimator

Grazing Season: Grazing

Use herd information to fill daily manure production

Crop year: 2018

Herd name: Beef Grazers

Total daily herd manure production: 2.73 tons/day

Field/Pasture size: 3.0 acres

Days on pasture: 5 days

Percent of each day spent grazing: 100 %

Estimated application rate: 4.6 tons/acre

Average animal units per acre over grazing season: 0.6

Cropping Screen – Better organized Nutrient Application Planner

Subfarm: Show all fields. | Field: Beef Pasture | Farm name: | Location: C

Group: Show all fields. | Soil Tests | SnapMaps | Fields | Nutrients | Cropping | Records

Nutrient Application Planner

Farm nutrient source availability*

Source name	Nutrient type
Beef Grazing	Beef, grazing
Dairy Semi- Solid	Dairy, semi-solid

*Values are for first year available nutrients in lbs/ton or lbs/1000 gallons

Field: Beef Pasture | Soil: ZtA, ZITTAU | Acres: 8

Soil Test: P: 553 K: 701

Crop: Pasture, variable stocking, managed continuous, d

Apply Nutrient System | **Field Restrictions**

Manure / Biosolid Applications

Source name	Season	Spread method	Area	Acres applied	Rate	Units	NO ₃ Inh.	Actual
Beef Grazing	Gr...	Grazing	Sp...	9.5	5			
Beef Grazing	Wi...	Grazing	Sp...	9.5	5			

Select a System to Apply

Select the nutrient system

Grazing

Open Nutrient Systems Editor

Cropping Screen - Winter Spreadable Acres

If your field has areas where manure is prohibited in the winter like within 300' of wells or streams, then Spreadable Area located in the Nutrient Application Planner can help you apply to the allowable parts of the field in the winter. It also allows you to apply manure or fertilizer to the winter restricted area in other seasons.

Nutrient Application Planner

Farm nutrient source availability*

Source name	Nutrient type	Units	N	N Incorpor	N Inject	P2O5
Beef Grazing	Beef, grazing	Tons	4	0	0	3
Dairy Semi-Solid	Dairy, semi-solid	Tons	2	2	3	3

*Values are for first year available nutrients in lbs/ton or lbs/1000 gallons

Field: Home 12

Soil: ZTA, ZITTAU Soil Test: P: 12 K: 128

Acres: 21.5 Crop: Oat-Pea Forage w/ Alfalfa Seeding Spring Prev: Corn grain

Apply Nutrient System **Field Restrictions**

Manure / Biosolid Applications

Source name	Season	Spread method	Area	Acres applied	Rate	Units	NO ₃ Inh.	Actual
Dairy Semi-Solid	Winter	Unincorporated	Sp...	17.2	10	ton...		

Fertilizer Applications

Source name	Season	Spread method	Area	Acres applied	Rate	Units	Time	Actual
Potassium	Spring	Unincorporated	Entire field	21.5	150	lbs/...		

Cropping Screen - Winter Spreading Practices

SnapPlus will select winter spreading strategies if it can be determined from the information already provided in the database or you can select two options for the winter application. The NM6 Winter Spreading Plan will show the practices for the field.

Field: H 8

Soil: MdC2, MCHENRY Soil Test: P: 280 K: 297

Acres: 2.51 Crop: Oat-Pea Forage w/ Alfalfa Seeding Spring Prev: Corn grain

Apply Nutrient System **Field Restrictions**

Manure / Biosolid Applications

Source name	Season	Spread method	Area	Acres applied	Rate	Units	NO ₃ Inh.	Time	Actual
7 Ton K...	Fall	Unincorporated	Sp...	2.5	10	ton...			
7 Ton K...	Winter	Unincorporated	Sp...	0.9	10	ton...			
7 Ton K...	Spring	Unincorporated	Wi...	1.6	10	ton...			

Fertilizer Applications

Source name	Season	Spread method	Area	Acres applied	Rate	Units
Potassium	Spring	Unincorporated	Entire field	2.5	300	lbs/...

See guidance message.

Winter Manure Spreading too few practices selected; two must be implemented from the Winter Strategies list.

2015 590 - Winter manure spreading practices.

Please explain

Practices for fields with slope > 6%. The slope of this field is 9%.
If there are any winter manure applications on this field, at least two of the practices must be followed.

Apply

- ☐ a. Contour buffer strips or contour strip cropping.
- ☐ b. Leave all crop residue (this prohibits removal of silage or bedding) and no fall tillage.
- ☐ c. Apply in intermittent strips on no more than 50% of the field.
- ☒ d. Apply on no more than 25% of the field during each application waiting a minimum of 14 days between applications.
- ☒ e. Reduce application rate to 3,500 gallons or 30 pounds of P2O5, whichever is less.

WI Agricultural Water Quality Performance Standards

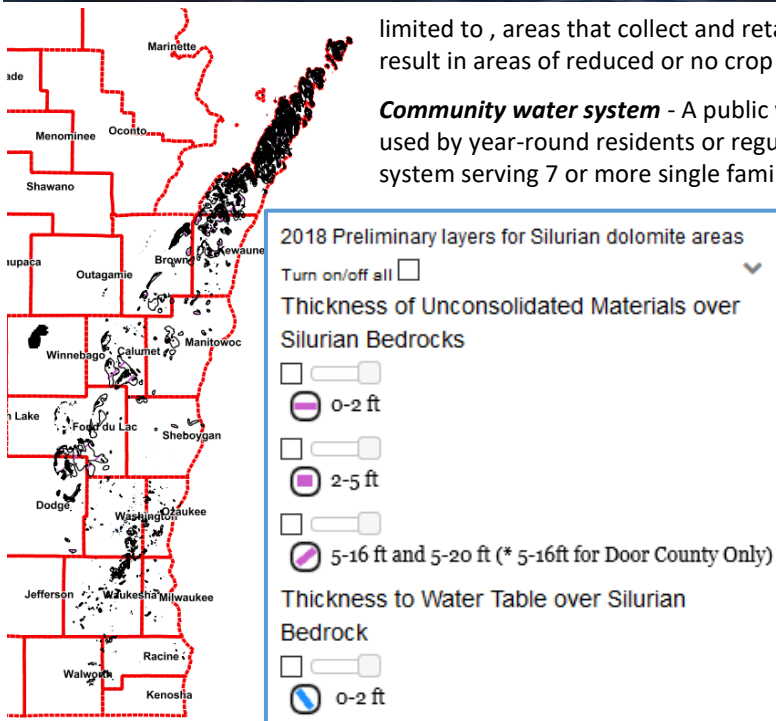
NR151 & ATCP 50 Wis. Admin. Codes

NR 151 Performance Standards	ATCP 50 conservation practices
<ul style="list-style-type: none"> – Meet T for fields and pastures – Follow 590 NM plan – Follow a 5' to 20' tillage setback from water – Prevent direct runoff: feedlots, feed, waste water, or manure storage to waters – Limit livestock access waters to maintain banks – Follow manure storage technical stds. when constructing/ abandoning. Maintain to prevent leaking or overflow. <p>Near surface water or areas susceptible to groundwater contamination</p> <ul style="list-style-type: none"> – Do not stack manure in an unconfined pile – Divert clean water away from barnyards, feedlots, and manure storage 	<p>Describes how farms need NM plan when offered cost share \$ or without cost share if:</p> <ol style="list-style-type: none"> 1. Participating in the Farmland Preservation 2. Regulated by DNR WPDES permit or local ordinance manure storage or livestock siting 3. Accepting manure storage cost share 4. Causing a significant discharge

Exceeding state standards ATCP 50.04 is only allowed if approved by either DATCP or DNR. A local governmental unit is responsible for analyzing the legal adequacy of its regulations.

NR 151.075 Wis. Admin. Code, Silurian bedrock targeted performance standard to protect wells from fecal contamination in areas of Wisconsin with Silurian bedrock was promulgated July 1, 2018. NR 243 Wis. Admin. Code, includes this performance standard. DNR's 2018 preliminary layers are shown in SnapMaps v.17.

Closed depression - A topographical basin where water ponds to a seasonal high water mark, has no external drainage, and drainage may occur either through direct conduits to groundwater or low areas where water ponds and infiltrates into the groundwater. Closed depressions may be identified using topographic maps and visual interpretations, ArcGIS tools, or other methods. A seasonal high water mark any include, but is not



limited to , areas that collect and retain water for extended time periods (days or weeks) that result in areas of reduced or no crop growth. NR 151.015(2).

Community water system - A public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. Any water system serving 7 or more single family homes, 10 or more mobile homes, 10 or more apartment

units, 10 or more duplex living units or 10 or more condominium units shall be considered a community water system unless information is provided by the owner indicating that 25 year-round residents will not be served. NR 811.02 (16). **Non-community water system** - A public water system that is not a community water system. A non-community water system may be either a non-transient non-community water system or a transient non-community water system. NR 811.02 (43), NR 812.07(64).

Concentrated Flow Channel - A natural channel or constructed channel that has been shaped or graded to required dimensions and established in perennial vegetation for the stable conveyance of runoff. This definition may include non-vegetated channels caused by ephemeral erosion, intermittent streams, drainage ditches and ends identified on the NRCS soil survey and

Soil thickness less than 2 feet and less than 5 feet were determined using NRCS's soil data. Soil thickness less than 20' were determined by the following sources: 1) Sherrill, M.H. (1978), Sherrill, M.G. (1979), 3) Evans, T.J., Massie-Ferch, K.M., and Peters, R.M. (2004). The Silurian distribution was determined by the following sources: 1) Mudrey, Jr., M.G., Brown, B.A., and Greenberg, J.K. (1982), 2) Evans, T.J., Massie-Ferch, K.M., and Peters, R.M. (2004), 3) Luczaj, J.A. (2011), and 4) McLaughlin, P.I. (2013).

may be identified as contiguous up-gradient deflections of contour lines on the USGS 1:24,000 scale topographic map. NR 151.015(2m), (590 IV.A.2.a.(1)). Refer to NRCS FOTG Standard 412, Grassed Waterway, for more information on construction.

Direct conduits to groundwater - Wells, sinkholes, swallets, fractured bedrock at the surface, mine shafts, non-metallic mines, tile inlets discharging to groundwater, quarries, or depressional groundwater recharge areas over shallow fractured bedrock. NR 151.002(11m).

Dry matter content - The material remaining after water is completely evaporated from the manure sample. Drying is considered complete when the sample weight remains constant (<0.1% DM change) with at least 6 hours additional drying time. UWEX Pub. A3769 Recommended Methods of Manure Analysis.

Mapping Field Bedrock information link <http://www.uwdiscoveryfarms.org/research-library/mapping-bedrock-research>

NR 151.075 and NR 243.143 Runoff Management Targeted Performance Standard ver.8/6/2018

Requires the following: No fecal contamination of wells; a NM plan to meet ATCP 50.04(3); and Silurian bedrock map information within or adjacent to cropland. NR 151.075(2), (4)(a)(b)(c)(d), (5)

<2' to Silurian bedrock or apparent water table **All mechanical applications are prohibited.** NR 151.015(18)(e), 151.075(9), (3)

<div><5' to bedrock</div> <div>Prohibited mechanical applications</div>	No mechanical Winter application when soils are frozen or snow covered and no headland stacking. 590 prohibits liquid manure in Feb. and March 151.075(7)	
	Prohibited mechanical applications: 1. Until fields are ranked for risk of pathogen delivery to groundwater. 151.075(6) 2. When rainfall >1" forecast within 24 hours. 151.075(8)	
<div>2'-20' to bedrock</div> <div>Prohibited mechanical applications</div> <div>Restricted application for solid and liquid mechanical applications</div>	Prohibited mechanical applications setbacks: 151.075(16) 1000' setback from community well. NR 151.015(18)(b), 151.075(13)(a) 300' up, 100' down slope from direct conduits to groundwater (DCTGW) NR 151.015(18)(c), (13)(c) 250' setback from other drinking wells. NR 151.015(18)(a), 151.075(13)(b) 100'setback from concentrated flow channel leading to DCTGW. (13)(d) Fields with ≥6% slope and concentrated flow channels to closed depression use one: 151.075(15) 1. <i>Incorporation</i> mechanical application within 24 hours. 151.015(8d) 2. The field has 3 or more years of <i>no tillage</i> . 151.015(11m) 100' setback from closed depression use one: 151.075(14) 1. Applied at least 24 hours prior to precipitation capable of producing runoff. 2. Incorporation/ <i>injection</i> within 24 hours. 151.015(8p) 3. The field has 3 or more years of no tillage.	
<div>Depth to bedrock</div> <div>Corn needs 130-190 lbs. N/acre depending on soil type and crop rotation</div>	<div>Solid manure conditions</div> <div>≥ 12% DM for CAFOs > 11% for 590 NM plans 2 lbs. N, 3 lbs. P2O5/ Dairy Ton *15T/A/Y= 30 lbs. N and 45 lbs. P2O5/A/Y</div>	<div>Liquid manure conditions</div> <div><12% DM for CAFOs ≤ 11% for 590 NM plans 12 lbs. N, 6 lbs. P2O5/ 1,000 Dairy Gals.*13,500 Gals./A/Y= 162 lbs. N and 81 lbs. P2O5/A/Y</div>
<div>2-3'</div> <div>151.075(10)</div>	<div>Incorporate* within 72 hours to ≤ 4" (10)(a)1. and; at least one of the following: (10)(a)2.</div> <div>a. Rate is lesser of A2809 or 15 T/Ac/Y 81 T/ac =162 lbs. N/ac, 40.5T /ac = 81 lbs. N/ac b. A2809 within 10 days of planting or on est. crop c. Pathogens ≤ 500,000 CFU</div>	<div>Pre-tillage if the field meets T* and; (10)(b)1. Incorporate/inject* to ≤ 4" within 24 hrs. (10)(b) 2. and; At least one of the following: (10)(b)3.</div> <div>a. Rate is lesser of A2809 or Table 1. Rates NR 214 13.5K g/a loam=162 lbs. N/ac, 6.75K g/a other=81 lbs. N/ac b. A2809 within 10 days of planting or on est. crop c. Pathogens ≤ 500,000 CFU</div>
<div>3-5'</div> <div>151.075(11)</div>	<div>Same as above a, b, c except ≤6" till depth (11)(a)1.</div>	<div>Pre-tillage if the field meets T* and; (11)(b)1. Incorporate/inject* ≤ 6" within 24 hours (b)2. and; Same as above a, b, c.</div>
<div>5-20'</div> <div>151.075(12)</div>	<div>Follow NRCS WI 2015-590 Standard and 151.075(16) above, no incorporation requirement.</div>	<div>Same as above except Table 1. Rates (12)(a)1. 27 K g/a loam=324 lbs. N/ac, 13.5K g/a other=162 lbs. N/ac</div>

***Exemption - Pre-tillage** to at least 2" below manure application is not required if fields can't meet T when implementing tillage, crops, contouring, filter strips, or cover crops. **Pre-tillage, incorporation, or injection** is not required if 3 or more years of no tillage, 151.075(10)(c)(d), (11)(c)(d), (12)(b)(c). Mechanical liquid manure applications are limited to ≤ 6,750 Gal./Ac/application where bedrock is within 2-5' 151.075(10)(c), (11)(c), and 10,000 Gal./Ac/application where bedrock is within 5-20', 151.075(12)(b).

Technical Standard available for cost share: 50.62 Manure storage systems. 50.69 Critical area stabilization. 50.70 Diversions. 50.75 Livestock fencing. 50.76 Livestock watering facilities. 50.78 Nutrient management. 50.80 Prescribed grazing. 50.81 Relocating or abandoning animal feeding operations. 50.82 Residue management. 50.83 Riparian buffers. 50.87 Sinkhole treatment. 50.89 Strip cropping. 50.96 Waterway system.

Questions for the participants:

- Given the corn price is around \$3.00/bushel and nitrogen is around \$0.40/pound, can we change the default **Maximum Return To Nitrogen** to .10. The red flag will not show until the highest N rate of the MRTN range .05 ratio is exceeded. Should we update the MRTN default ratio?

Edit MRTN Information

Crop Year: **2017**
Crop: **Corn grain**

Entering a price for N and corn will calculate a rounded value for price ratio. See Extension Pub A2809(2012) for more details.

N price in \$/lb (optional)	Corn price in \$/bushel (optional)	Calculated price ratio
0.40	3.25	0.12

N lb/acre

UW Recommendation: **190**

MRTN Price Ratio: 0.05 * required

MRTN Range Point: 0.10 * required

Buttons: Calc, Accept, Cancel, Show MRTN Table

- Do you want a column for all the restrictions on a report?
- Do you want a report that tells you which fields have no N fall restrictions, and no SWQMA present?
- Do you want the NM Checklist as a report filling each item when possible?